

SECURITY

P 240004Z *Multi*
FM NPIC
TO SSO DIA PROD CEN
AFSSO USAFE
AFSSO PACAF

1964 SEP 24 01 21Z

OUT54143

OPCEN
CNO

YWQLAZC/AFSSO SAC
YWQLAZC/AFSSO ACIC
YWQLAZC/AFSSO FTD
ZEM

TOP SECRET. THIS IS A

25X1

25X1

25X1

SSOS PASS TO APPROPRIATE TCOS. RELEASABLE FROM SSO

25X1

CHANNELS. CITE NPIC 2975.

SUBJECT: CAMERA INFORMATION FOR MISSION 1010-1.

A. THIS PHOTOGRAPHY INVOLVES THE USE OF EIGHT CAMERAS: TWO
MAIN CAMERAS, FOUR HORIZON CAMERAS, A STELLAR CAMERA, AND
AN INDEX CAMERA.

B. OPERATIONAL FOCAL LENGTHS (MM)

HORIZON

	MAIN	PORT	STARBOARD	STELLAR	INDEX
FWD UNIT	609.577	54.43	54.54 (PART A)	84.023	38.426
AFT UNIT	609.577	55.21	55.06 (PART B)	83.989	38.075

C. LENS DISTORTION (PIN CUSHION) MM

DEGREES

(1) MAIN LENS	3	2	1	0	359	358	357
FWD UNIT	.005	.002	.001	.000	.000	.001	.002

25X1

TOP SECRET

2

AFT UNIT .006 .003 .002 .000 .001 .003 .006

(2) HORIZON CAMERAS (MM) FWD AFT
 PORT STARBOARD PORT STARBOARD

(RADIAL) 10 DEGREES .010 .015 .007 .001

20 DEGREES .017 .022 .015 .004

(TANGENTIAL) MAX VECTOR .004 N/A .002 .004

D. DEPRESSION ANGLES OF HORIZON CAMERAS RELATIVE TO NOMINAL
 MAIN CAMERA

PORT STARBOARD

FWD 14 DEGREES 39 MIN. 15 DEGREES 13 MIN.

AFT 15 DEGREES 25 MIN. 15 DEGREES 23 MIN.

E. CAMERA FILTER AND EXPOSURE DATA

	MAIN	HORIZON	STELLAR INDEX
FILTER	WRATTEN 21	WRATTEN 25	NONE WRATTEN 21
APERATURE	F 3.5	STARBOARD F 8.0	F 1.8 F 4.5
		PORT F 6.8	

SLIT WIDTH/EXPOSURE 0.175 INCH 1/100 SEC. 2.0 SEC 1/500 SEC

FILM SO 132 SO 132 SO 102 SO 130

F. RESOLUTION CAPABILITIES (HIGH CONTRAST)

(1) (L/MM AVG) MAIN PORT HORIZON STARBOARD HORIZON

FWD 185 142 139

AFT 171 151 151

(2) INDEX (L/MM AVAR) PART A 77 PART B 73.3

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G. TIMING MARKS

FREQUENCY MARKS WILL APPEAR ON THE FILM AT A RATE OF 200 CYCLES PER SECOND.

H. CALIBRATED ANGLES OF CAMERAS

(1) CALIBRATED CONVERGENT ANGLE OF MAIN CAMERAS 29 DEGREES 52.38 MIN.

(2) CALIBRATED ANGLE BETWEEN STELLAR AND INDEX CAMERAS

(PART A) 89 DEGREES 55 MIN.

(PART B) 89 DEGREES 59 MIN.

I. IMAGE MOTION COMPENSTATION DATA

A. CYCLE RATE (CPS) AND GROUND ANGULAR VELOCITY (GAV IN RAD/SEC)

REF. LEVEL			AMPL LEVEL		
NO.	CPS.	GAV.	NO.	CPS.	GAV.
8	0.3236	0.0293	3	0.1260	0.0114
8	0.3238	0.0293	2	0.1427	0.0129

B. PASSES: REF. 8, AMPL. 3 : 1D1 THRU 5D1

REF. 8, AMPL. 2 : 6D1 THRU 61D1

J. PROGRAM TIME DATA

PASS	CAMERA ON TIME				PROGRAM ON TIME	PROGRAM
	(ZEBRA TIME)				UP RAMP	DURATION
	DAY	HOUR	MIN	SEC	(SEC)	(SEC)
1D1	15	0	22	26	2034	28
4D1	15	4	53	57	1443	99

4

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5D1	15	6	27	15	1632	272
6D1	15	8	0	53	1791	359
7D1	15	9	27	45	1551	216
7D2	15	9	32	24	1831	199
9AE	15	12	9	19	333	45
9D1	15	12	28	24	1478	318
21D1	16	6	42	12	1704	257
21D2	16	6	47	47	2039	154
22D1	16	8	12	8	1649	142
22D2	16	8	15	48	1869	156
23D1	16	9	42	16	1606	276
25D1	16	12	44	37	1645	288
31D1	16	21	56	3	2017	83
36D1	17	5	26	16	1771	186
37D1	17	6	55	15	1659	203
37D2	17	7	2	34	2098	156
38D1	17	8	26	41	1691	185
38D2	17	8	30	35	1926	243
39D1	17	9	57	6	1666	318
40D1	17	11	26	29	1578	379
41D1	17	12	59	24	1733	97
41D2	17	13	1	36	1865	114
47DE	17	22	9	53	2062	97

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52D1	18	5	40	24	1847	230
53D1	18	7	11	6	1839	97
53D2	18	7	13	48	2001	417
54D1	18	8	41	1	1780	184
54D2	18	8	46	23	2102	154
55D1	18	10	11	24	1754	260
55D2	18	10	16	31	2061	84
56AE	18	11	22	33	598	45
56D1	18	11	39	27	1612	85
56D2	18	11	42	26	1791	260
61D1	18	19	20	56	2060	84

NOTE: DATA IS THE SAME FOR BOTH THE MASTER (FWD) AND THE
SLAVE (AFT) UNITS. PROGRAM ON TIME UP RAMP, ADD 30
SECONDS TO THE VALUES GIVEN FOR 1D1 THRU 40D1.

K. TIME CORRELATION (MILLISECONDS)

PASS	SYSTEM LINE	CLOCK TIME	DIFFERENCE
1	1350.885	207900.436	
8	38009.976	244559.533	PLUS 0.006
9	43827.132	250376.691	PLUS 0.008
16	83682.863	290232.430	PLUS 0.016
24	125583.428	332133.002	PLUS 0.023
31	165459.551	372009.132	PLUS 0.030
40	213056.317	419605.907	PLUS 0.039

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47 252701.819 459251.416 PLUS 0.047

56 300224.541 506774.146 PLUS 0.054

63 34004.917 546554.529 PLUS 0.061

T O P S E C R E T

/END OF MESSAGE/

(ABOVE MESSAGE ALSO PASSED ☐

25X1

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